A standardized scale for drawing.—The fifth monograph[1] issued by the Department of Education of Johns Hopkins University attacks a problem which seems on the surface to be fairly concrete but always proves to be baffling, namely, the problem of rating drawings. Unlike such relatively simple school activities as handwriting and spelling, drawing exhibits an utterly bewildering infinity of variables. The result is that anyone who attempts to make a scale of drawings is driven step by step to narrow his problem and finally to be content with a few doubtful examples instead of a full exhibit of all aspects of the type of school work with which he tries to deal.

The authors of the present study began with the ambitious plan of dealing with all aspects of drawing: representation, design and composition, and color, but found their task so complicated that they were obliged to be content with a study of representation only. Furthermore, they found that they were obliged to limit their work to four kinds of representation and to attach the other drawing problems which arise in the school to these samples by what must be recognized as a very loose connection. They say:

> Teachers should keep in mind the fact that the house, the rabbit, the boy running, and the tree, are but types, and when teaching these type-forms other forms based upon the principles involved should be studied at the same time, e.g., when working upon the house, children should draw boxes, street cars, milk wagons, trucks, tables, or other objects involving the elementary principles of construction and perspective [p. 59].

The scale which issues when all of the limitations are recognized undoubtedly has some value. That value, however, is not due to the artificial mathematical refinement which is practiced in tabulating and retabulating the judgments on which the scale is based, but to the illuminating descriptions of figures and of grounds for classifying drawings which the authors use in setting up their artificial mathematical structure. There are a number of so-called legends given to judges to guide in the classification of the drawings which are most suggestive. They were evidently developed before the elaborate statistical tables were made. They will be helpful to anyone who has to do with drawings.

As for the painfully elaborate statistical handling of thousands of judgments, one is disposed to say that such work may be useful in training students in technical manipulation, but it is not a sound example to offer the world of scientific method as applied to educational problems.

CHARLES H. JUDD

Wireless telegraphy and telephony.—The books which have been published in the past two years on wireless communication have been of two sorts, technical and popular. The technical books have been frankly written for those

[1] L. W. KLINE and G. L. CAREY, *A Measuring Scale for Free-hand Drawing. Part I, Representation.* Johns Hopkins University Studies in Education, No. 5. Baltimore: Johns Hopkins Press, 1922. Pp. v+61. $2.00.

who already have a working knowledge of electricity and a technical vocabulary. The popular books, written for the amateur, have been limited largely to the construction of wireless apparatus. Some few have combined the construction of apparatus and the theory of its operation. These, in the main, have been too difficult for the boy or average adult reader. This has left the field open for a book which presents the theory of operation and the construction of wireless apparatus in a readable form.

To meet the demand for a non-technical discussion of wireless communication, Mr. A. Frederick Collins has prepared a handbook[1] for radio amateurs. This book may be read alike by the wide-awake boy and the adult amateur. The book is a valuable contribution to the existing field of radio literature since it presents this rather difficult subject from two angles: the construction and purchase of wireless apparatus and the underlying principles of its operation.

The book contains chapters on both wireless transmission and the reception of wireless messages. The early chapters contain descriptions of the construction and operation of very simple sets. The later chapters are progressively more difficult as they take up new devices which improve the simple sets first described. This makes it possible to get a clear understanding of the more complex types of apparatus by first mastering the principles underlying the simpler sets. A very important feature of the book is the appendix which contains a list of books on wireless, a list of the manufacturers of wireless apparatus, definitions of common wireless terms, and other useful information.

The book is suitable for a supplementary text in the high school and will be of interest to any amateur experimenter in the wireless field.

WILBUR L. BEAUCHAMP

Civic education.—No subject in education is receiving more attention at the present time from writers and speakers than that of education for citizenship. It is tempting to analyze the causes of this output, but the purpose of this review is not to tell why so much is written on this subject but to discuss Professor Snedden's recent book[2] in which he attempts to do more than has been done in most of the books of this character, by writing for the purpose of directly stimulating the teacher to a more adequate endeavor in utilizing the social sciences in the development of social qualities. The author states the purpose of the book as follows:

> This book is designed to aid teachers and other educators who are seriously trying to find and develop more purposive and effectual objectives and means of civic education. The discussions and conclusions here presented are based upon these convictions: (*a*) that the aims or objectives of any purposed type of education must first of all be

[1] A. FREDERICK COLLINS, *The Radio Amateur's Handbook*. New York: Thomas Y. Crowell Co., 1922. Pp. xxx+355.

[2] DAVID SNEDDEN, *Civic Education*. Yonkers-on-Hudson, New York: World Book Co., 1922. Pp. xvi+333. $2.16.